

Correspondence

Letters should not exceed 400 words and should be typed double spaced (including the references) and be signed by all authors

TO THE EDITOR, *Genitourinary Medicine*

Conventional tissue culture compared with rapid immunofluorescence for identifying *Chlamydia trachomatis* in specimens from patients attending a genitourinary clinic

Sir,
Teare and colleagues conclude from their study that the use of the Syva monoclonal fluorescent antibody provides as sensitive a means of detecting *C trachomatis* infections as a conventional cell culture procedure.¹ This is not an unusual conclusion because it is one that has been drawn by several other workers. It is, however, unusual and remarkable to detect chlamydiae in 76% of men with non-gonococcal urethritis and in the cervix of 71% of women with pelvic inflammatory disease. These extraordinarily high positivity rates need some explanation and provide us with an opportunity to draw attention to an issue that may have been overlooked in this and other studies. The issue is that the "standard" method is regarded as the one providing the infallible results. Teare and colleagues consider a false positive result as being one in which the organisms are not detected by their standard cell culture method but are detected by the fluorescent antibody procedure. But what about the possibility of a false positive result occurring as the result of identifying as inclusions in cell culture bodies that are not inclusions? A correlation between the two procedures could still exist if there was also misidentification of fluorescing particles in genital smears. Could this be the explanation for the remarkably high positivity rates presented without comment by these authors? We doubt whether any regional preponderance could account for them, though there may have been a quirk of patient selection unknown to us (16% of patients were excluded from analysis for various reasons). Furthermore the authors may possibly have encountered a period of high chlamydial detection rates by chance alone. In this regard it would be instructive to learn what the detection rates have been over the periods before and since the study. The authors state that they had a well established culture service at the start, yet noted that during the study the incidence of chlamydial infection

was "much greater than had hitherto been thought". If detection rates have been maintained at the levels reported, then we would conclude that there may well be technical problems along the lines we have indicated and that all is not well in the state of Denmark Hill.

Yours faithfully,
D Taylor-Robinson*
G L Ridgway†

*Head, Division of Sexually Transmitted Diseases, Clinical Research Centre, Harrow, Middlesex.

†Consultant microbiologist, University College Hospital, London.

Reference

Teare EL, Sexton C, Lim F, McManus T, Uttley AHC, Hodgson J. Conventional tissue culture compared with rapid immunofluorescence for identifying *Chlamydia trachomatis* in specimens from patients attending a genitourinary clinic. *Genitourin Med* 1985;61:379-82.

TO THE EDITOR *Genitourinary Medicine*

Comparison of immunofluorescence and culture methods in the diagnosis of chlamydial infections

Sir,

In a recent paper comparing conventional tissue culture with rapid immunofluorescence in the identification of *Chlamydia trachomatis*, Teare and his colleagues suggested that the choice of method rests with "cost, expertise, and practicalities in individual departments".¹ We would like to present the data from an analysis carried out at the Coventry department of genitourinary medicine.

We studied 109 men attending the clinic with symptoms and signs of urethritis (5 pus cells/high power field). Urethral specimens from the first 55 (group 1) were tested for chlamydiae using Imagen (Boots Celltech, Slough, Berkshire, England) and cell culture.

Specimens from the remaining 54 men (group 2) were tested using MicroTrak (Syva, Maidenhead, Berkshire, England) and the same cell culture method.

The table shows our results. In group 1, 11 specimens were positive by immunofluorescence and 12 by cell culture. Taking culture technique as the standard method, the sensitivity of Imagen was 83% and specificity was 98%. In group 2, 24 specimens were positive by MicroTrak and 27 by culture. The sensitivity was 74% and specificity 86%.

TABLE Results of two immunofluorescence tests for *Chlamydia trachomatis* compared with culture of urethral specimens from 109 men with urethritis

	Culture positive	Culture negative
Group 1:		
Imagen positive	10	1
Imagen negative	2	42
Group 2:		
MicroTrak positive	20	4
MicroTrak negative	7	23

Of the two immunofluorescence systems, the slides stained using the MicroTrak method were easier to read because the elementary bodies stained well against a better counterstain. Though specimens from men presented few problems, on some slides from a group of women patients tested subsequently, we found a heavy uniform fluorescence, which was difficult to interpret. This was found in both the Imagen and MicroTrak slides and may have been due to the excess mucus in the slide.

Imagen cost £1.95 and MicroTrak £2.45 per test, excluding the cost of technician time. Conventional culture cost £1.25 including technician time. In our hands conventional tissue culture was cheaper and at least as efficient in diagnosing chlamydial infections. Though in clinics where an adequate culture method already exists, culture is cheaper and

easier to perform, in clinics where the transport of slides is necessary and delays may occur, or where a chlamydial diagnostic service is being established de novo, slide tests may have a role.

Yours faithfully,
V Manoharan*
P Hammond†

* Department of Genitourinary Medicine, Royal Infirmary, Glasgow.

† Public Health Laboratories, Coventry and Warwickshire Hospital, Coventry.

Reference

Teare EL, Saxton C, Lim F, McManus T, Uttley AHC, Hodgson J. *Genitourin Med* 1985;61:379-82.

TO THE EDITOR, *Genitourinary Medicine*

Control of hepatitis B and human T lymphotropic virus type III (HTLV-III) in homosexuals in Sheffield

Sir,
The serious psychosocial impact of hepatitis B carriage can now be reduced by the cost effective immunisation of high risk groups, such as male homosexuals.¹ Studies conducted in London clinics for sexually transmitted disease (STD) during the 1970s, however, indicated that most homosexual and bisexual men had already been exposed to hepatitis B virus.

We have compared the prevalence of serological markers for hepatitis B infections, by using radioimmunoassay tests for

hepatitis B surface antigen (HBsAg) and antibodies to HBsAg in this high risk population attending provincial departments of genitourinary medicine from September 1981 to August 1984 (Leeds) and from January 1984 to June 1985 (Sheffield). The table shows the results.

In contrast to the 56.5% prevalence at a London clinic,² both our study populations had an appreciably lower prevalence. It is postulated that these findings largely related to differences in sexual behaviour, though other factors, such as ethnic background or associated intravenous drug abuse, may also play a part.

Preliminary studies in Sheffield also show a lower prevalence of HTLV-III seropositivity, currently 3% of homosexual and bisexual men, compared with over 30% reported in those attending London clinics.³ The persisting relatively low prevalence of hepatitis B infection in our at risk population whose methods of transmission are similar and infectivity higher than those for HTLV-III provides some encouragement that the spread of HTLV-III related disease among provincial homosexual men may be much lower than that witnessed in London.

We suggest that one method of inhibiting the future spread of these two potentially serious viral sexually transmitted diseases would be to combine screening with an active vaccination programme against hepatitis B and individual counselling about the risk of acquiring and transmitting HTLV-III. Such a programme would encourage those at high risk to attend clinics and help promote a cost effective approach to the prevention of the long term sequelae of these potentially serious viral infections.

Yours faithfully,
G R Kinghorn
E Monteiro,

Department of Genitourinary Medicine,
Royal Hallamshire Hospital,
Glossop Road, Sheffield S10 2JF

References

- Adler MW, Belsey EM, McCutchan JA, Mindel A. Should homosexuals be vaccinated against hepatitis B virus? Cost and benefit assessment. *Br Med J* 1983;286:1621-4.
- Coleman JC, Evans BA, Thornton A, Zuckerman AJ. Homosexual hepatitis. *J Infect* 1979;1:61-6.
- Mortimer PP, Jesson WJ, Vandervelde EM, et al. Prevalence of antibody to human T lymphotropic virus type III by risk group and area, United Kingdom 1978-84. *Br Med J* 1985;290:1176-8.

TO THE EDITOR, *Genitourinary Medicine*

Antibodies to cytomegalovirus in heterosexual and homosexual men in Cardiff

Sir,
Cytomegalovirus (CMV) antibody in women of childbearing age varies from 40% to 70% in most temperate climates.¹ In the United Kingdom, most of Western Europe, and North America 50% to 60% of the population will eventually acquire the infection; about one third in childhood and the rest between the ages of 15 and 35 years.²

Blood samples were taken from 120 homosexual and 133 heterosexual men. The CMV complement fixation was measured by the technique of Bradstreet and Taylor.³ The table shows the results. They compare with a previous study of homosexuals and heterosexuals attending the Middlesex Hospital, London, which found antibody to CMV at a titre of 1/4 or more in 92% of homosexuals, 80% of bisexuals, and 56% of heterosexuals.⁴ In that study, using a series of log linear models, sexual orientation was shown to be the most important determinant of antibody to CMV in the population.⁴

TABLE Antibody to cytomegalovirus in 120 homosexual and 133 heterosexual men

	No (%) with titres of:	
	< 1/4	> 1/4
Homosexuals	44 (37)	76 (63)
Heterosexuals	92 (69)	41 (31)

Coutinho *et al* noted in a study in the Netherlands that of 710 homosexuals, 501 (70.6%) had complement fixing antibodies to CMV on entry to the study.⁵ During follow up (maximum 23 months) 69 CMV infections were found. Of these, 50 were primary infections among 209 seronegative men (attack rate 27.3%), and 19 were recurrent infections among 501 seropositive men (attack rate 6.2%).

Our study shows a prevalence of CMV antibodies in homosexuals fairly close to that of Coutinho *et al*, who used the same cut off titre of 1/8. The higher incidence in the Middlesex Hospital study may be partly explained by a lower cut off titre of 1/4, but cannot account for the difference between heterosexuals (London 56%, Cardiff 31%). The difference between homosexuals and heterosexuals is more clearly polarised in the

TABLE Incidence of hepatitis B surface antigens (HBsAg) or antibodies to HBsAg (anti-HBs) in 815 homosexual and bisexual men in Leeds and Sheffield

Clinic	No of men studied	No (%) with HBsAg or anti-HBs
Leeds	522	162 (31)*
Sheffield	293	47 (16)*

* $p=0.001$.